

REMARKS

Claims 1-20 are pending in the application. Claims 1-20 have been rejected. In view of the following remarks, Applicant respectfully requests favorable reconsideration and allowance of the pending claims.

Rejection of Claims 1-8 and 14-17 Under § 102

Claims 1-8 and 14-17 have been rejected under 35 U.S.C. § 102 based on U.S. Patent No. 4,508,985 ("Pavlik"). Applicants respectfully traverse the rejection. In view of the following remarks, Applicants respectfully request favorable reconsideration and allowance of claims 1-8 and 14-17.

Pavlik does not teach or suggest a method of tuning the torsional frequency of a rotor with a "tuning slot that extends radially inwardly from the bottom of the winding slot . . .," as recited by independent claim 1. Nor does Pavlik teach or suggest a rotor with a "tuning slot positioned at the quadrature axis and extending radially inward from the bottom of the winding slot," as recited by independent claim 14.

Applicants' tuning slot and its position with regard to the winding slot are important features of Applicants' claimed invention. Conventional approaches to tuning the torsional frequency of a rotor require adding weight and/or inertia to the rotor. These approaches are costly in terms of sacrificing rotor size and weight. Applicants' claimed invention makes it possible to tune a rotor's torsional frequency utilizing a slot that "extends radially inwardly from the bottom of the winding slot." Thus, Applicants' claimed invention makes it possible to tune a rotor without necessarily adding additional weight or inertia to the rotor.

The Examiner has identified item 32 of Pavlik as being analogous to Applicants' tuning slot. However, item 32 of Pavlik is simply the tapered bottom of the winding slot. It is not possible for Pavlik's item 32 to both be the bottom of the winding slot and to extend beyond the bottom of the winding slot. In this regard, it is well-known in the art to taper the bottom of a winding slot as shown in Pavlik (and Applicants' Figure 3). The tapered bottom is usually filled with conductor or left empty for cooling. This tapered bottom, however, cannot reasonably be characterized as a slot extending beyond the winding slot.

Based upon the above structural differences between Pavlik and the tuning slot implemented in Applicants' recited methods, Applicants respectfully submit that independent claims 1 and 14 - and claims 2-8 and 15-17 through their dependency - are patentably novel and unobvious over Pavlik.

Rejection of Claims 9-13 Under § 102

Claims 9-13 have been rejected under 35 U.S.C. § 102 based on U.S. Patent No. 4,827,172 ("Kobayashi"). Applicants respectfully traverse the rejection. In view of the following remarks, Applicants respectfully request favorable reconsideration and allowance of claims 9-13.

Kobayashi does not teach or suggest a rotor with "at least one tuning slot that extends radially inward from the bottom of a winding slot . . .," as recited by independent claim 9. Like Pavlik, discussed above, Kobayashi simply discloses a winding slot of a particular shape. Kobayashi does not disclose any kind of slot that "extends radially inward from the bottom of a winding slot." The neck sections 48 and the cylindrical sections disclosed in Kobayashi are simply parts of the slot cell. They do not extend radially beyond the slot cell. Accordingly,

Applicants respectfully submit that independent claim 9 - and claims 10-32 through their dependency - are patentably novel and unobvious over Kobayashi.

Rejection of Claims 18-20 Under §103

Claims 18-20 have been rejected under 35 U.S.C. § 103 based on U.S. Patent No. 4,508,985 ("Pavlik") and U.S. Patent No. 4,827,172 ("Kobayashi").

As discussed above with regard to claims 1-17, neither Pavlik nor Kobayashi teaches or suggests a rotor with "at least one tuning slot that extends radially inward from the bottom of a winding slot . . .," as recited by independent claim 18. In fact, neither Pavlik nor Kobayashi discloses any kind of slot that "extends radially inward from the bottom of a winding slot." The structures identified by the Examiner in Pavlik and Kobayashi as tuning slots are actually winding slots and do not include the structure limitations discussed above. Accordingly, Applicants respectfully submit that independent claim 18 - and claims 19-20 through their dependency - are patentably novel and unobvious over Pavlik and Kobayashi.

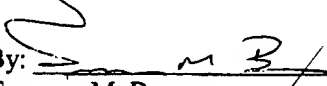
CONCLUSION

For the foregoing reasons, Applicant respectfully requests favorable reconsideration and allowance of claims 1-20. Should the Examiner have any questions concerning this paper or application, or if any issues remain, the Examiner is respectfully requested to contact Applicant's undersigned attorney to resolve such issue or question.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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